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Wolf Spider (*Lycosa carolinensis* Walchenaer)
Photograph by Charles J. Stine

MARYLAND NATURALIST

The Natural History Society of Maryland

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MARYLAND NATURALIST

WOLF SPIDER

On the cover of this issue is a photograph of a female wolf spider, *Lycosa carolinensis* Walchenaer, with a multitude of her offspring on her back. The species depicted is 3/4 inches long and the legs cover a 3 inch span.

Wolf Spiders are so-called because they stalk and jump upon their prey. Some species are found on land lurking beneath stones or rubbish; others have aquatic habits. When collecting pond salamanders in late winter and early spring I have often seen the dark form of a wolf spider skittering across the surface of the water, with the tips of the long legs being placed in a most nimble fashion so as not to break the surface tension.

Some wolf spiders may be nomads but many, like our cover specimen, reside in vertical tubes in the earth. The tube is usually lined with silk and the entrance surrounded by a turret woven of grass or other debris readily available. The spider uses the turret as a watchtower, looking out over the terrain to see if the coast is clear for a short foray.

When the spiderlings emerge from the egg sac they climb upon the mother's back and are carried about for some time. The exact function of this is unknown although it is probably a protective habit.

The individual shown was a well-traveled spider. It was captured in Swallow Falls Park, Maryland by Mr. James Fowler, driven to Baltimore, photographed, then mailed to the Academy of Natural Sciences in Philadelphia.

The author will long remember the concern generated in the Stine household when the baby spiders began to fend for themselves all over the living room furniture.

C.J.S.

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The red fox fluctuates greatly in numbers in different parts of its range. The gestation period of the fox is about seven weeks, and the young, which range from four to nine, are born in spring under natural conditions. Its burrow or den is often located under a bush or thicket in an open field or under a log or tree in open woods. It is not unusual to see a fox family basking in the sun near their den on the Maryland countryside.

Since recorded history, the red fox has always been regarded as the most swift, cunning and adaptable animal, but the so-called fox wisdom, when viewed objectively, is more fiction than fact. Its adeptness to survive and thrive in places of extensive human habitation, nevertheless, is a tribute to its intelligence and learning ability.

CASE OF THE

DISPLACED FOX.

By Romeo Mansueti
Maryland Department of Research and Education
Solomons, Maryland

If a committee of naturalists were to confer formal papers of American citizenship upon familiar and well-known woodland personalities, the red fox of Eastern United States would probably be the first so honored. But not for long. A clamor of protest would immediately be raised by a small group of mammalogists and "fox sleuths." They have been cogitating upon some controversial fox facts and legends that are over three hundred years old. And they say that there is reason to be indignant. Why?

The red fox of the East is an alien!

The case begins in the days preceding the Revolutionary War. Some of the early settlers pined for a taste of fox-hunting that they knew in Britain. Not long afterwards fox-hunting was born in America. Few people thought of it as a primitive, if not barbarous, sport. But our story is not one of man's inhumanity to the red fox, but rather the gray fox's inhumanity to man.

Colonial fox-hunters found only the gray fox to satiate their sporting appetite, and, of course, they were resentful. After all, they cried, the red fox is the only fair game for such a noble sport. *But they found no red fox, even after several years of collective harassing the wildlife from Boston to Savannah.* To many of them, the lack of red-coated Reynards was unbelievable in this New World of unbounded wealth. But here the crux of the controversy lies. Did the red fox, alias *Vulpes fulvus,* inhabit what is now the area from Maine to Florida before the coming of the white man?

Most mammal students claim that red foxes did not exist here before the last century. Others say otherwise. The evidence switches from hot to cold for both sides. The squabble has been battled with quiet, serious undertones in the highest courts of fox genealogy - the gray, silent museums of natural history, but without the conventional inexhaustible dossiers of evidence. Each scene probably ends in a sort of "case dismissed" for lack of concrete evidence. That is why even today few authorities will commit themselves in favor of one side or the other. Notwithstanding such circumstances, herewith is most of the pro and con evidence in the case of the displaced fox.

The first fox-hunting in America of which there is any record, took place about 1650 in Queen Anne's County, Maryland, and only the gray fox was victimized. From that time on no Maryland homestead was complete without its pack of hounds and its race course. "There was always a slave whose sole duty was 'to tend hound' and woe be unto him if any injury befell a favorite ...," stated an old newspaper. Maryland was almost entirely settled with English, and they brought fox-hunting with them. They could not accustom themselves to the gray brother of the English red fox.

Both mammal authorities and fox-hunting enthusiasts agree that the gray fox has always been a resident of the Eastern United States. The gray fox

is a respectable canine with a luxurious gray wrap, fine clean-cut features, and a generally unsportsmanlike indisposition to please foxhounds and hunters. Besides, it is so different morphologically from the red fox that it is placed in a separate genus. Gray foxes are reputed to be less intelligent than their red-coated brethren. In addition to shirking the responsibility of leading hounds on a proverbial merry chase through hill and dale, gray foxes are notorious tree climbers. If foxes could laugh at fox-hunters, the gray would perhaps indulge in the sneeriest chuckle. For these acts of contempt, the gray has been branded as undesirable.

The first reference to the red fox's doubtful claim to United States' citizenship must also be laid to Marylanders. According to tradition, in August, 1730, eight "sleek and prosperous tobacco planters" of Talbot County discussed the "sad difference between hunting the red fox in Merrie England, where four of them were born, and hunting the gray one in the land of their adoption." They declared that there was as much difference between hunting the two species as there was between a canvasback and barnyard duck. The upshot of it was, according to an old tale printed not many years after, that the captain of the tobacco schooner, *Monocacy*, owned by one of the party, was instructed to bring back with him eight pairs of English red foxes on his next trip to Liverpool.

The animals arrived "in due course," and were liberated along the Eastern Shore of Maryland. The occasion is recorded as "one of much merriment, entertainment and sport. The daughters of the country gentry rode on pillions behind their brothers or cavaliers to the great ball which was given at Chestertown in honor of the occasion ... The hour these eight pairs of red foxes were set loose in the barn yards of the Maryland farmers may safely be reckoned the birth of genuine fox-hunting in this country. The way the foxes multiplied was marvelous, but they did not migrate into Virginia until the hard winter of 1779-80."

Peter Kalm, the early Swedish explorer-naturalist who visited America in 1770, cast further doubt on the red fox's American origin in his *Travels*. He declared that "Red Foxes are very scarce here [Pennsylvania and New Jersey]: they are entirely the same with the European sort." He further remarked that William Bartram, famed Philadelphia botanist, told him the Indians were unanimous in saying the red fox was never in the country before the coming of Europeans.

More evidence was placed on record by other disbelievers as if there was a conspiracy against the red fox. In 1830 the identity of the American and European red foxes was discussed in Doughty's *Cabinet of Natural History*. He reported that "In 1787 when quite a boy I was at the death of the first Red Fox killed in Perry Co., Pa. Not a person present, nor any who saw it for some days, had ever seen or heard of an animal of the kind. At last it was shown to a Mr. Lenarton, an old Jerseyman, who pronounced it an English fox. He said the red fox was imported into New York from England by one of the first English governors, who was said to be a great sportsman, and turned out on Long Island, where they remained for many years but at last made their way on the ice to the mainland and spread over the country."

Audubon and Bachman, in their monumental *Quadrupeds of North America,* confirmed the fact that a large part of the mountainous country inhabited by the red fox was destitute of them a hundred years previous to 1850. "In the early history of our country the red fox was unknown south of Pennsylvania, the State being its southern limit. In the process of time it was found in the mountains of Virginia, where it has now become more abundant than the gray fox." Historical accounts of early Maryland and Virginia invariably fail to mention red foxes as part of the indigenous fauna, although other animals, some of them quite rare, are recorded.

A few years later, Spenser Fullerton Baird, the Olympian naturalist of the old Smithsonian Institution, pointed out in his *Mammals of North America* that all previous reports that the red fox was an alien was true. He established the almost certain non-existence of it in Eastern Pennsylvania during comparatively recent times by the following statements: "It is not a little remarkable that there have as yet been no remains of the red fox detected among the [relatively recent] fossils derived from the Carlisle and other bone caves. This would give color to the impression, somewhat prevalent, that the red fox of eastern America is the descendant of individuals of the European red fox imported many years ago, and allowed to run wild and overspread the country. The fact of their present abundance and extent of distribution is no barrier to the reception of this idea, as the same has been the case with horses brought over by the Spaniards after the discovery of America, and set at liberty."

Samuel N. Rhoads, the well-known Pennsylvania mammalogist, in a most outspoken manner, designated the red fox as "un-American." He investigated many reports concerning the foreign origin of these canines. After reviewing them in 1903 he stated, "In view of these statements and of the fact that European foxes had been introduced in New England, Pennsylvania, and Virginia, for sporting purposes by the middle of the 18th century (1750), it looks quite likely that the red foxes mentioned by Kalm as being found in N. J. and Pa. in 1770 ... were pure descendants of the European red fox." He also mentioned that, "It is also significant that a general N. J. law, fixing bounties on wolves, was in 1714 extended to include "*Red* Foxes," indicating that they had not begun to be troublesome until that date." Despite these iconoclastic utterances, people persisted in believing that the red fox was American.

When historical evidence fails to prove a point in the field of natural history, the paleontologist is often called upon the scene to present his findings. Professor Baird found no fossil evidence of red foxes. Gray fox remains were plentiful.

One item was introduced in 1899 for the crumpling defence that might have turned the overwhelming evidence. Edward Drinker Cope, a famous jack-of-all-trades zoologist, described a fox on the basis of one upper molar from the Pleistocene remains of Montgomery County, Pennsylvania. Consequently, *Vulpes latidentatus* Cope, dubbed the "Fossil Red Fox" by Professor Rhoads, must have lived in Eastern North America less than 100,000 years ago. This alone does not stand as sufficient proof that a red fox could have lived there within recent times, or at least within the last 20,000 years. Doctors J. W. Gidley and L. C. Gazin, two paleontologists of the United States National

Museum, examined a cave in Western Maryland containing the rich Pleistocene remains of 41 birds and beasts, of which 28 species were still represented by living forms. Among this assortment of fairly-recent fossils the scientists did not find any remains of the *Vulpes* clan.

As recent as 1946, Dr. Raymond M. Gilmore of the U. S. Fish and Wildlife Service reported that among the fox-like mammals in the archeological collections from southwestern Pennsylvania only the gray fox remains were found. He ventured the opinion that the red fox might be an important faunal time-marker for eastern archeology. In other words, if red fox bones were found in Indian excavations, the artifacts could be dated sometime after the settlement of Europeans.

If the majority of scientists subscribe to the theory that the red fox found on the East coast is European rather than American in nationality, it is quite natural to ask, "Why is the American red fox called *Vulpes fulva*, while its European great-great-grand parents are known by another name, *Vulpes vulpes* [or *Vulpes vulgaris*, as it was formerly called]?" Professor Rhoads stated that with all the evidence at hand, he felt that, "In such a case *Vulpes fulvus* of course is a synonym of *Vulpes vulpes* (Linnaeus). He also wanted to know, "Where then was the American red fox in pre-Columbian times? If it was not in [Pennsylvania] in 1789, nor in the mountains of Virginia till a much later date, it must have been somewhere in the region north of the Great Lakes or in the Hudson Bay regions, where the Delaware Valley Indians, who talked to Bartram, could not come in contact with it. This was probably the case, and in these regions only are we to seek for specimens to establish the real differences between the two continental forms. No doubt the difficulty of determining the status of the two in the past has been due to the use by naturalists of specimens more or less European in their ancestry."

Anselme Gaetan Desmarest, a French naturalist, is responsible for naming the American red fox, but his description gives no definite clue to the controversy. The latter is based on the *Renard de Virginie* of Palisot de Beauvois, who published a description in the *Bulletin de las Societe Philomathique* based solely on the skull of a gray fox which he compares with that of the European red fox. Beauvois thought he had in hand the skull of an American red fox, and this of course would destroy the tenability of *Vulpes fulva* Desmarest, except for one thing. Desmarest's description of external characters was based on a red fox skin, for which a locality was not stated. Presumably the skin was from the United States, although Desmarest did not visit America. Dr. Gilmore testified in this matter, "Though the presence of a gray fox skull in the description does not invalidate the use of the name for a red fox because the description can be fixed upon the skin, this skin may be actually that of an introduced European red fox, in which case the name would become a synonym of *V. vulpes*."

Even if we do believe that the red fox of southeastern United States did not occur before the coming of white man, we cannot say that it did not exist on the North American continent. On the contrary, red foxes (not *Vulpes fulva*) were indigenous to the Great Plains region and to most of

northern North America. This fact has never been disputed. But it has been seized upon by some scientists to amplify their contention that *Vulpes fulva* is not of a recent European origin. Foremost among them was Elliott Coues, a brilliant American ornithologist, and Henry C. Yarrow, a noted explorer and zoologist, who contended in 1875 that there was no reasonable question of the specific identity of the American and European red fox. They thought it a reasonable hypothesis that, as with many other American mammals, it had an original circumpolar distribution in warmer times, and had spread southward in both hemispheres, developing geographical distinctions of race, but not distinct species. Thus they called the American fox a subspecies of the European, i. e., *Vulpes vulgaris pennsylvanicus*. They felt that if the Eastern red fox had an alien background, this fact might account for its abundance in settled districts, but that it would scarcely allow time for its universal distribution over the continent. Apparently they thought the lobbyists who branded the Eastern red fox as European were trying to pin this appelation on all the North American red foxes. Of course this was not so.

Some of the early scientists have tried to present objectively the differences between the European and American red fox. Audubon observed that such differences were all comparative and not positive. With ample opportunity for comparing both forms, he says the American red fox "is a little the largest; its legs are less robust; its nose shorter and more pointed; the eyes nearer together; its feet and toes more thickly clothed with fur; its ears shorter; it has a finer and larger brush; and its fur is much softer, finer, and of a brighter color." Many mammalogists, on the other hand, would hardly commit themselves to pointing out clearcut differences.

One other difficulty had arisen in late years. This is a result of the wide practice of introducing red foxes into the East from Northwestern states. The interbreeding of the native stock of red fox of Western and Northwestern North America has probably occurred with the introduced red fox of Eastern United States. William J. Hamilton, Jr., author of the *Mammals of Eastern United States* stated in 1943 that the red fox, *Vulpes fulva,* is distributed in "All of Eastern North America, from Maine to Wisconsin, south to northern Georgia and Mississippi. Less common southward. Red foxes have been introduced into the southern states for purposes of sport; some of these may prove to be *Vulpes regalis* [Northern Plains red fox]."

The native red foxes as a tribe are widely distributed on North America. Harold E. Anthony, in his *Field Book of North American Mammals*, records, in addition to the Eastern red fox, *Vulpes fulva* 12 species and subspecies. Among them, the Nova Scotia, Labrador, and Newfoundland red foxes, occupy ranges near the northern limit of the Eastern red fox. In recent years, no one has attempted a detailed revision of the relationships of red foxes, nor has anyone tried to delineate the ranges of the group.

And so the controversy resolves itself in a sort of a stalemate. Where the displaced fox will ultimately end up is a moot point. With our modern methods of statistical approach to difficult and closely related problems the solution is probably not far in the offing. Professor Rhoads summed up the dispute nicely when he declared, "... it may be asserted as an indisputable fact that no satisfactory comparison was ever made and published which had for its subjects a

series of European and Virginian, or Pennsylvania red foxes with skins, skulls, and data prepared according to modern standards. Dr. Gilmore probably went further than anyone else toward delivering a verdict. His decision, "... from an examination of red fox specimens from Europe and Alaska, it appears likely that all the red foxes of northern Europe, Asia and North America are conspecific." In a few words, the red foxes of the world are practically first cousins.

The final verdict must come from a source where an exhaustive and meticulous study of red foxes from Europe and America has been made. It will never be made from a cacophony of unscientific polemics. In the final analysis, the displaced red fox clearly waits for one brave prosecutor to try its case in a scientific journal. Who will risk becoming an iconoclast of American natural history?

The feeding habits of the red fox are much misunderstood. It feeds largely upon small mammals and birds, rarely anything larger than a rabbit or barnyard fowl. The fact that it eats large numbers of rodents largely offsets any complaints from sportsmen and farmers. Strangely, it also devours berries, nuts and corn in summer and fall.

Aside from its importance in fox hunting and as a much-maligned predator, the red fox is an important carrier of the dread disease - rabies. In the last few decades foxes have apparently increased greatly in numbers throughout Eastern United States.

Since high populations produce conditions ideal for the spread of the disease, rabies has spread in Virginia and West Virginia once its presence became established. A few cases of fox rabies have been tentatively reported for Maryland.

AN ANNOTATED LIST OF AMPHIBIANS AND REPTILES FROM THE BROAD CREEK- DEEP RUN AREA, HARFORD COUNTY, MARYLAND

by

E. Clyde Prince
Robert Duppstadt
Daniel J. Lyons

In 1948 the Boy Scouts of America opened a large camp at Broad Creek, Harford County, Maryland. During the eight years the camp has been open, forty species and subspecies of the eighty-one amphibians and reptiles known to occur in Maryland (Fowler, James A., 1949, List of the amphibians and reptiles of Maryland and the District of Columbia, *Acad. Nat. Sci. Phila.*, pp. 1-2, mimeo) have been collected at the locality. All specimens taken are in the private collection of the authors, but these are soon to be incorporated into the collections of the Natural History Society of Maryland.

The area studied comprises fifteen hundred acres in the Piedmont of Harford County, approximately two miles south of the Susquehanna River. The camp is trisected by Broad Creek and Deep Run Creek. The latter contacts the Susquehanna through Broad Creek. Mixed deciduous forests, coniferous forests, and broken fields fill the area, with occasional rocky outcrops. Included in this region is a virgin hemlock stand. Improved farm land surrounds the perimeter.

Most of the field work was accomplished in July and August of each year. Occasional specimens were contributed by scouts and camp staff members.

The private collection of Robert Lambert was generously donated for this study. Mr. John E. Cooper, Department of Herpetology, Natural History Society of Maryland, has been very helpful with advice and criticism.

ACCOUNT OF SPECIES

Diemyctylus viridescens viridescens - Newts were very common in the area. Most of the specimens collected were efts, which showed a distinct preference for slopes of hills in deciduous forests. Captives fed readily on earthworms and beetle larvae.

Desmognathus fuscus fuscus - This is the most abundant salamander of the region, being found in almost every stream, creek, and pond. Eggs were found on numerous occasions, often in rotting logs which had fallen into the streams. Frequently, females were with them.

Plethodon cinereus cinereus - This is a common species but was seldom encountered due to its secretive habits. It shows a preference for moist situations near streams in deciduous forests.

Plethodon glutinosus glutinosus - The slimy salamander shows an erratic distribution here and is seldom found. When collected it is usually found in small congregations. The habitat preference is similar to that of *P. cinereus*.

Pseudotriton ruber ruber - The red salamander has been found in most of the springs and streams in the region. The largest taken measured 133 mm., the largest larva measured 88 mm.

Eurycea bislineata bislineata - The two-lined salamander has been collected in the same situations as *Desmognathus*, but not quite as abundantly.

Eurycea longicauda longicauda - Not a common species, the long-tailed salamander is sometimes found in rock crevices near cool water. The longest one captured, a male, measured 159 mm.

Bufo terrestris americanus - The American toad is found in most of the drier areas of the forests. It is often associated with the Fowler's toad.

Bufo woodhousii fowleri - Fowler's toad is found throughout the forested region and the open fields. It appears to be quite abundant, even congested in its range.

Acris gryllus crepitans - Two cricket frogs were collected in 1948 at the junction of Deep Run Creek and Broad Creek. Probably this frog is very abundant early in the year.

Hyla versicolor versicolor - One of the larger of the area's tree frogs, the gray tree frog is more commonly heard than seen. However, many are picked up from bushes along Broad Creek Lake and Broad Creek. Young specimens are green in coloration.

Hyla crucifer crucifer - The spring peeper is occasionally captured in the early part of the season around marshes and ponds, but is seldom encountered after breeding.

Rana catesbeiana - Large bullfrogs are very common throughout all of the wet areas of the region. At night they have been heard calling from 8:00 P.M. to 3:00 A.M. Many exceed 100 mm. in body length. In the spring, tadpoles of this species were often seen feeding on aquatic vegetation near the edge of Broad Creek Lake.

Rana clamitans - The most common species of frog in the area was the green frog. It was found in every aquatic situation investigated.

Rana palustris - Pickeral frogs were found in the early summer on the edges of ponds and creeks. As the season advances they become more scarce. Few tadpoles of this species are ever seen.

Rana pipiens - In standing with its reputation as one of Maryland's commonest frogs, the leopard frog is found throughout most of the damp and wet areas of the region. They formed the bulk of the food of the water snakes captured.

Rana sylvatica sylvatica - One of the more beautiful frogs found is the eastern wood frog, although it is rare in the region.

Sceloporus undulatus hyacinthinus - Occasionally a northern fence lizard is encountered along rocky cliffs in forested areas. They are somewhat common, but hard to capture. Several females were collected containing eggs. The average number of eggs was four.

Eumeces fasciatus - During the course of our collecting, ten five-lined skinks were collected. They were found in a variety of dry habitats, but prevalently in rocky areas. One specimen was found on the south bank of the Susquehanna, approximately $\frac{1}{2}$ mile south of the Mason-Dixon marker, in 1952.

Carphophis amoena amoena - The Eastern worm snake is fairly common in the area, but is rarely seen because of its burrowing habits. The species shows a distinct preference for slopes in deciduous forests.

Diadophis punctatus edwardsi - Another fairly common snake of the region is the Northern ring necked snake. Specimens have been found all over the reservation.

Several specimens are captured annually which appear to exhibit characteristics of both *punctatus* and *edwardsi*.

Heterodon platyrhinos platyphinos - The common hog-nosed snake represents one of the area's most familiar species. Specimens of both the common phase and the black phase have been found in a variety of habitats, including open fields and the banks of streams. The largest specimen taken was 900 mm. in length. The smallest were newly-hatched young, about 146 mm. in length.

Coluber constrictor constrictor - A rather hard to find species in this area is the black racer. Very few specimens are captured each year.

Elaphe obsoleta obsoleta - The pilot black snake is the most common snake to be found in the area, as many as five specimens having been collected in one day. The most productive spot for this species is a large hollow tree near Deep Run Creek.

Lampropeltis doliata triangulum - Another species which is found in the area but is by no means common is the Northern milk snake. The number of juvenile specimens captured outnumbers the adults almost two to one. The majority of specimens examined had reddish-orange blotches, while others were marked with blotches of brown and gray.

Natrix septemvittata - Broad Creek provides excellent ecological background for this species. Specimens are seldom seen during the daylight hours, but are most often taken at night. The species is by no means common in this area.

Natrix sipedon sipedon - The northern banded water snake is very widely distributed throughout the area.

Storeria dekayi dekayi - De Kay's snake is very rare in this area. One specimen is available.

Haldea valeriae valeriae - Another rare species in the Broad Creek area. Only three specimens of the Eastern Ground Snake have been recorded from here.

Thamnophis sirtalis sirtalis - The Eastern garter snake is seldom seen in this area. Few specimens are captured annually.

Thamnophis sauritus sauritus - The eastern ribbon snake has adapted itself to all ecological habitats in the area.

Ancistrodon contortrix contortrix - The copperhead is the only poisonous snake in this area. Specimens are usually found sunning themselves on rocks in the three quarries found bordering Deep Run Creek. Other specimens have been captured throughout the area.

Sternotherus odoratus odoratus - Along the edges of ponds and lakes, the musk turtle can be seen feeding on small minnows and vegetable matter. Not many of these have been collected, but many have been seen.

Kinosternon subrubrum subrubrum - The mud turtle is rather rare in the area, but breeds here. Eggs and young have been collected.

Chelydra serpentina serpentina - Common snapping turtles are found often during the season in ponds and lakes throughout the region. Specimens of 25 pounds have been verified.

Clemmys guttata - The spotted turtle is reasonably common in this area. It is distinct in its preference for ponds and lakes, and captives are ready feeders.

Clemmys insculpta - In some of the deciduous forests, an occasional wood turtle is picked up. Most specimens are over 130 mm. in carapace length. Females predominated in our collections.

Clemmys muhlenbergi - The Muhlenberg's turtle, has been found three times in the area. In 1952 Daniel J. Lyons obtained two adults. In 1954 Robert Duppstadt collected two specimens, on July 12th and August 24th, respectively. Both were adult females. An available live specimen, captured July 10th, 1955, is an adult female. Measurements: carapace, 102 mm.; carapace width at bridge, 67 mm.; at widest part, posteriorly to bridge, 69 mm.; plastron length, 85 mm. This specimen is very tame and feeds readily on small frogs.

Terrapene carolina carolina - The most common turtle of the area is the eastern box turtle. It is found throughout the wooded areas and fields of the region.

Chrysemys picta picta - The eastern painted turtle is fairly common in the larger ponds and streams. Most of those collected were young, under 55 mm. in length.

NATURE NOTES
De lè Brooke Manor, St. Mary's County. Maryland
Summer 1955.

By L. McCormick-Goodhart

De lè Brooke lies ten miles above Solomons on the right bank of the Patuxent River facing east. The living-room porch is thirty feet from the water and sixteen feet above it. The visible range of view is about 120° of arc from N.E. to S. The width of the river is 1½ to 2 miles. The area usefully coverable with a 34 and 47x Zeiss telescope and an 18x Zeiss binocular, is about one mile. These were constantly used. Two hundred yards to the north of the Manor House is a 180 yard pier. A half-mile from the house to the north is "Marsh Point" with a white sand beach at the edge of the marsh of some 50 acres. There are two creeks, one close to Marsh Point running in about a ¼ mile, and one close to the north of the pier about 5 acres in extent. The house lawn on the west side is about 200 yards long with various trees of fair size including Black Walnuts, a large Sycamore, and a fine Horse Chestnut, some poor Chinese Elms. The only "rarity" is a Chaste Lamb tree* By the river porch is a bed of hollyhocks and hydrangeas and a thick bed of juniper. To the south of the house is a tangled stretch of undergrowth with some neighbours beyond.

N.B. The initial N. stands for my wife; M. for my brother-in-law; L. for our overseer.

Sunday June 12, the day of our arrival; We observed today: Ospreys (3), busy fishing or rather "eeling": Kingfisher (1): Purple Grackle (1): Mocking Bird (1) sang on the wooden chair on lawn: Humming Bird (female) at hydrangeas several times: Song Sparrow (on the river side of house); Gull (1) ? Ring-billed, flying north: American Egret (1) flew past north 7:20 PM: Great Blue Heron (1) flew past south 7:40 PM and landed in marsh: Cardinal (1) male: Fish Crows: Swifts: Bob-white (heard): Green Heron (on nearest riprap "groin", 40 yards from porch at 8:05 PM). **

Monday June 13: Weather cool and raw. Temp 62° at 7 AM. Cloudy, river flat. 7 AM Great Blue Heron and 8 Crows on Sandy Point. Not a single bird seen all day on or over the river.

Wednesday June 15: Sunny, up to 75°.

1. 2:45 a Green Heron came into the first groin at only 45 yards from us sitting on the lawn. Stood there at least ten minutes looking for minnows.

2. At 3:30 a Black-crowned Night Heron flew across close by going south. An unusual daylight appearance.

* The Chaste Lamb tree, Mr. McCormick-Goodhart advises, is a shrub which grows up to above 15 feet. It was originally introduced from South Europe and Western Asia. Other names for it are the "Hemp Tree" and the "Monk's Pepper-tree". The scientific name for it is *Vitex Agnus-castus*. This specimen is the only one he has noted.

** The Author's scheme of underlining has been retained.

3. At 6:55 an adult Bald Eagle flew across south at about 250 yards and not over a hundred feet up. It settled in a tree in desolate St. Mary's Creek, 3/4 of a mile to the south.

4. Killdeer heard.

5. Ospreys not seen fishing. One gull heard. Humming-Bird not seen. Other birds more or less as on 12th.

Thursday June 16: A pair of Egrets in House Marsh. A Bluebird in the evening on "Pneumonia's" (the statue's) head and hand. No river birds, no gulls.

Sunday June 19: "Nor'Easter". Our Song Sparrow sang when the storm was at its height.

Monday June 20: Fine, in the 70s. L. told how he had once watched a large water-snake trying to swallow an eel. He killed the snake and the eel got away. Also that he had seen a Muskrat on House riprap, ½ mile from its marsh home. He thinks there may be a Snowy Egret in the marsh. No special birds in or over the river.

Wednesday June 22: Fine and a thunderstorm about 5 PM. Our very Irish cook, begorra, found a snake (about 20 inches) on her window-sill. Shades of St. Patrick! I took a kitchen knife and "hoiked" it off into L.'s" waiting arms" below. It was a small Black Snake.

Thursday June 23: Superb morning. From 6 to 6:30 AM watched a party of 6 Great Blue Heron, a pair of Bald Eagles and some Crows, resting quietly on Marsh Point. At first only two of the "Blues" held their heads up, the others seemed to be sleeping. One pair of English Sparrows busy building under our bathroom eaves.

Sunday June 26: We have a pair of Mocking Birds, a pair of Cardinals and a pair of Thrashers constantly around the house in addition to the Song Sparrows. The Mocking Birds have a nest in the Rose of Sharon, 30 yards from the house. Today, Randy Gibson, aged 9, caught a marine monster which no one at first recognized - finally identified as a young Toadfish, 2" long (a real pollywog!)

Monday June 27: We have many Tiger Swallowtails on the Hydrangeas and Butterfly-bush and we saw our first Zebra today. At 4 PM we saw a Fish Crow make three approaches to the water and on the third it plucked up a dead fish about 4" long. A Mocker was soundly cursing it. No birds in the river, or gulls over it. The "Hummers" busy on the Hollyhocks and Hydrangeas.

Tuesday June 28: Kayaking along at low tide at midday in the House Creek, not a bird visible. Small shoals of "Alewives" appeared close on shore. One lot below the surface looked like a ray.

Wednesday June 29: We again watched a Fish Crow flying along the water with a fish in its beak. About half the crows going by are being mobbed by small birds

sometimes for 2 or 300 yards. Our first Goldfinch flew across in front of the porch. A Lizard, not a common skink, ran the whole length of the porch ledge about 4 feet above the ground and bordering our junipers. It is strange we have not so far seen or heard Redwings. At 8:30 an immature Ring-billed Gull (bill black at outer end) settled and preened on one of our rowing canoes. (Watched through the 35x at 100 yards). At the same time a Great Blue Heron was fishing at low tide 200 yards out in the river. Curious that no Vultures, Jays or Chipping Sparrows have been seen. At about 7 a Kingfisher chased its mate or friend over the water and forced him or her down twice into the water. And moments later a Phoebe was observed flitting at short intervals, from one rock to another on the first groin. The Ringbill left the canoe for down-river at 7:15. L.'s 2 fat little beagles amused us by hunting a young Rabbit along the brick path.

Thursday June 30: Glass up to 85. Fine. Nothing to report until 9 PM when we were delighted to hear a Whip-poor-will, calling from the direction of Mary's Creek, quite a $\frac{1}{2}$ mile away.

Friday July 1: Temp 87° and calm. I watched a violent chase of a black female Tiger Swallowtail by a normal male. One could hear the wings when they collided. A Monarch (not a Viceroy!) feeding on a Butterfly Bush. After dinner N.'s brother J. made several desperate lunges with a shrimp net and captured some 25 Alewives. A wonderful substitute, fried, for white-bait! Whip-poor-will not heard again, (nor all through the summer).

Sunday July 3: It is curious how scarce the Marsh Wrens and Redwings seem to be. In Point Creek we heard only one of the former. No jelly-fish to speak of (we did not meet one today) and no soft-shelled crabs yet.

Monday July 4: Glass 89°. Superb day. This morning our first Cicada sang. Towards Dusk about 8 Purple Martins fussed around the top of our 70 ft. Sycamore. A pair of Killdeer flew south about 500 ft. up. We have Fireflies but not many. The moon at 9 a golden-red over the water all but full. No jelly-fish. Not a vulture seen yet.

Tuesday July 5: Very hot, $91\frac{1}{2}^{\circ}$ and sultry. At about 4 a good view of a Skink by the kitchen river door. So we have two different lizards. Martins again fussing at the top of the Sycamore. A Night Heron (we could hardly see it) strutted along the pier and then "jumped" into the water. Fireflies seem on increase.

Wednesday July 6: Very hot, $91\frac{1}{2}$, with a severe thunderstorm in the late afternoon. In the forenoon we received a brief visit from a strange bird which flew on to the roof of the porch and called loudly. As the storm approached, four Purple Martins, all females, sat on the pier railing for some time.

Thursday July 7: Coming down at 7:30 to my astonishment found a Guinea Hen on our porch ledge. Whose? (It turned out to belong to a neighbour boy who did not want it back, for chasing automobiles!) One fairly large jelly-fish spotted by N.

Friday July 8: Foggy. Our Mocking Birds have two young under a day old. The nest is in the Rose of Sharon (Althea, "Duchess de Brabant"). Two jelly-fish seen by N.

Saturday July 9: Sultry. A Skink eyed us for several minutes on the front steps before quietly slipping away. What is the bird that calls, "Sweetie, Sweetie, Sweetie"?

Sunday July 10: Our Chaste Lamb tree is a wonderful sight covered with tall purple pyramidal flowers. But what is remarkable is that every butterfly in the country seems to be feeding on it, all the Swallowtails (except possibly the Blue) Skippers, Monarchs, etc. A beautiful sight. After dinner we listened to a Cicada with an undoubtedly different "voice" - a continuous lowpitched monotone in place of the vibrating crescendo and diminuendo of the ordinary species. Are these creatures distinguishable by "voice"? At about 7:30 N. caught a Lady-bird with orange-red wing-case with two black spots below the head and four in a row above its lower end, Species?

Monday July 11: Still sultry and dull. Our Cicadas are on the increase and at 9 AM there is a chorus. Our Song Sparrows have a nest in the junipers right next to the porch and today we watched a young one flutter and fall to the ground, unable to hold on.

Wednesday July 13: We have only one pair of Robins on the lawn as in the case of other common birds. N. suspected that the Humming Birds are nesting in the Rose of Sharon but we could not prove it. She took several coloured photos of the Chaste Lamb tree and hopes the butterflies will appear in them. In all my 70 years I have not seen such a lepidopterous sight except ones in 1934 when Monarchs swarmed by the hundreds on our trees at Nantucket, prior to migrating. We found an inch size moth in trouble on the W. porch. It seemed to have some beetles' wing-cases attached to its feet on each side. Quarry caught in a web and freed itself with the remains of a victim? The moth in fairly good shape after the obstructions were removed and soon fluttered off. It is astonishing that we have seen no Watersnakes coasting as usual in and out of our riprap. More amazing is that L. himself has seen none all summer and he truly believes that hurricane Hazel finished them off. He said others had noticed their absence and think the same. Certain birds are still very much missing: "Chippies", Vultures, Sapsuckers. Nor do we have four-legged "chippies" here, alas! No Egrets or Gulls seen recently. At 4:45 six Starlings were feeding on the lawn by the Sycamore. At 6 PM a good view of a young male Orchard Oriole for a few seconds on a telephone wire. (They have been here for years). A few soft-shell Crabs are reported.

Thursday July 15: Flat calm and bright sun. At 8:15 a solitary Purple Grackle, a Starling on the lawn and a Redwing within easy hearing distance. At 2:45 great excitement. The maid shouted that she had seen a squirrel pursued by L.'s beagles but it quickly transpired it was a Groundhog (Woodchuck) an almost completely unknown animal in St. Mary's Co. The dogs treed him at 20 feet into a fork of our old Black Walnut and there he stayed glaring at us. At about 4 PM, N. and I in swimming saw five jelly-fish but no crabs. At 9 PM just after dark, we were returning down the dell ($\frac{1}{2}$ mile from the house) when what should cross a few yards in front of the car but a Red Fox. L. had not seen one for years,

the Grays being much commoner. N. reported a bird apparently flying in from the river which was obviously a Kingbird, probably after chasing a crow.

Friday July 16: A Catbird at dusk warbled melodiously to N. on the porch and then "mioaued" continuously for two minutes or so. The Humming Birds are still gorging on the Hollyhocks.

Saturday July 17: At 9:30 PM an insect chirped loudly on the lawn side. Might have been a Katydid, but am not at all sure. Certainly "Katie Did" did not sound clearly.

Monday July 19: End of the hot spell and more life about - Ospreys, Herons and "Hummers" busy. A Bobwhite calling and the Cardinal wakes us in the morning. It is odd that we have not heard a Mourning Dove. We now have three sorts of Lizards around the house (1) the little fellow who ran along our river porch ledge before and did it again today. He is olive brown, thin, no stripes, quick and straight-moving and has a distinct spike (about 1/8 inch) raked backwards on his tail. (2) The Skink on the lawn porch already noted. (3) A fairly thick-set blackish metallic fellow with two broad creamish stripes along the sides. Had caught a bumble-bee and was "worrying" it. He spat it out while still alive and then killed it. No spike on this creature's tail. It is noteworthy that we clearly heard cows mooing across the river at about 2 miles.

Tuesday July 20: Fine and calm. At about 6:30 we listened for the first time to an unknown woodpecker "drumming" on the house. Our nightfall insect is now definitely a Katydid. He now pronounces his name fairly clearly. At 5:30 PM. N. spotted a Bald Eagle at about $\frac{1}{4}$ mile flying from us across the river - our third view of this majestic bird. We found our first Dragonfly decapitated on the lawn and still alive. It was a beauty and long, 3 inches. Thorax a pale dull green; the abdomen a beautiful robin's egg blue (about $\frac{1}{4}$ inch wide) and a "tail" with the same blue in two stripes irregularly marked (or jagged) to near the tip on each side of a black dorsal line. What species?! And how decapitated? Another bird so far not seen here is the Blue Jay. We are "overflown" with them at home.

Wednesday July 21: Foggy. We removed the Mocking Bird's nest, the young having flown. The outward parts very roughly "thrown together" with stiff twigs. L. tells me that he has about 20 baby Quail near his cottage, supposedly of two families.

Sunday July 24: About 80° - 10 degrees cooler. Very soon after returning from town M. found our first Box Turtle on the lawn beyond the spring. His yellow and brown markings unusually pronounced.

Monday July 25: A suppertable day. Small jelly-fish are now in greater force and appear to concentrate somewhat. In a small area under the pier there were about 20 and then none for stretches of many yards. Fireflies still with us. Our "Hummers" have a queer habit of flying into a recess of the junipers and staying several seconds (on the wing). Soft-shells just beginning. L.'s brother caught 8. Not a single Vulture seen yet, very strange.

Tuesday July 26: We now know we have at least one pair of Killdeer in the soy-beans. The Bobwhite heard, and also very faintly a cock crowing across the river at 2 miles.

Sunday July 31: L. tells us the welcome news that we have a family of Otters in House Creek and he knows where their den is opposite the osprey's nest -- that is, otters living in brackish water, not fresh. So far we have seen no Muskrats, though, according to L. they are plentiful. L. also informs us that Jacksnipe regularly visit the marsh every autumn - good news. A Phoebe heard close to the house.

Monday August 1: Warmed up again. At 7 AM there was a commando of small birds sitting on the pier but too far to identify with the 18x. During the forenoon a 4-inch Lizard was first seen inside our river porch. When N. thought he might tease the baby (1) he scuttled behind a cigar-box and then turned and ran to the other end. Still another species?! Much shorter than the others and thin. Soon after N. spotted a large and striking golden brown wasp with "purple" wings, inside the porch. After a chase, we captured it. Obviously a Paper Wasp. Sometime after lunch L. drew our attention to an "oyster-boat" about 300 yards off shore, but actually it was a new type of craft, a mannose-digger. Using the telescope we could see the large mussels coming out of about six feet of water on an escalator; L. said the owner had just commenced with three of these and there are no state regulations to interfere with him. The mannose are shipped north. But how are they dug out at the bottom? At 5 PM great excitement-N. saw a small white bird flying ½ mile out over the river. I at once suspected a Forster's Tern but after several minutes trying to catch it in the 18x what should it be but a Least Tern. After "diving" two or three times it settled on a boat stake where the telescope showed at once its white forehead and orange feet. We were really thrilled and not long after we spied its mate. The Bobwhite called its triple note "Ber, ber, tweet". For some 10 minutes after 6 PM we at least watched a female Redwing picking food only a few yards away between the rocks of the nearest groin. Quite a day!

Tuesday August 2: We slept in the violet room and got cool air. Our supposed Katydid always sings at the same hour apparently from the same place. At 6:30 N. announced a commotion in the baby's fireplace. I removed a young barely fledged swift. On release outside, he fluttered on to the brick walk and made for the Hollyhocks. Not much hope for him. He hissed at me vigorously and pecked. Several Bluebirds on the lawn under our glorious horse-chestnut, N. spotted a Bald Eagle flying apparently towards the osprey's nest. At 5:30 we caught a handsome green stinkbug on the floor in the baby's room, probably out of the soy-beans. We let him depart this life. Our pretty little terns did not appear - too hot? N. heard the Bobwhite early. A few fireflies still with us.

Wednesday August 3: 87° all day. At 5:15 PM N. watched the Eagle attacking a young osprey over the water. When the latter got away we listened to it call its "High C" piteously until it reached the shore. The Eagle again flew in the direction of the osprey's nest. Before dusk, we found the fledgling Swift on the lawn trying to climb a flower tub. It then fluttered over into the Hydrangeas and was observed to be pecking. It looked strong and emitted its "twitter", though feeble. Since we felt that it could feed by itself, we did not place it in a tree. Shortly after we watched an Osprey, flying low over the

water. We very rarely see them from above. Being tired in mid-river it flew around two oyster stakes and finally settled for some five minutes precariously on the first one. It appears to have whitish shoulder patches. A young bird?

Thursday August 4: 88°. Our young Swift has now chosen a juniper tree by the porch and is picking insects. It looks a fine case of self-preservation. While bathing we saw a Tern dive into the wavelets, (1 and 2 feet high), probably our Least friend of 3 days ago. Soon after the Bald Eagle swooped down at about 300 yards opposite us with a splash and picked up an eel, presumably dead as it hung limp with the white undersides showing. We watched the female "Hummer" searching our porch junipers inch by inch for insects. As before she actually flew into the dark recesses almost to the ground on the near side. There are still practically no crabs or jelly-fish. N. spied a small Blue Hard-shell and promptly ran for cover! Two little neighbour girls caught three "Doublers". After dinner we sat on the wooden lawn chairs and I quickly surrounded by a bevy of wasps. We turned the chair over and there was a nest. A few minutes later L.'s semi-beagle, Jiggs, came along and in a trice he was in full flight, yelling at the top of his lungs. Had been stung on a hind-pad!

Saturday August 6: N. driving me to town when about a mile up on the gravel road, suddenly spotted a large Blue Crab. He stopped the car but when he went to pick it up, it was so pugnacious that he didn't dare! Must have been dropped there. On my return later, N. told me she had watched from our bedroom window, the mating after two or three unsuccessful attempts, of our English Sparrow with what she is sure was one of his own young female progeny only recently out of the nest. One wonders.

Sunday August 7: The "soft-shells" have at last arrived. L. has caught about 15. Rain at last.

Monday August 8: A strong Nor'Easter. Glass 74°.

Tuesday August 9: The "blow" continues. Towards the pier a gull and on a stake, a tern, both unidentified. No Bobwhite heard, but our first Vultures- a pair - seen at and over Marsh Point. Nearly a two months wait for them! Many small birds on the wires, mostly unidentified in the overcast. How we wish we knew bird-songs and calls better! After lunch with a strong breeze from the N.E. we were surprised to find an "avicade" of gulls on the pier, 15 Laughing and 3 Ring-bill. The 34x having been found to be cloudy, we inserted the 94x and were astonished by its efficiency even in the poor light. We also removed the "sun-shade" which helped a lot. The gulls stayed about two hours, the tern (a Least) on its stake, much longer.

Wednesday August 10: Hurricane "Connie" anticipated. Glass at 7, 69½°, later rose to 75. Our pair of Egrets at the edge of the marsh; not seen for several weeks. N. without the glasses thought they were pieces of paper! No gulls.

Thursday August 11: Glass 83° at 11. Our Egret in evidence and our Least Tern on a stake. No hurricane yet! Heard Bobwhite. Just before 2 PM with an approaching thunderstorm we had a magnificent view through the 47x of our pair of Bald Eagles on Marsh Point. They were about 50 yards apart both standing in

a few inches of water. One then "loped" up onto the sand itself and then took wing. Interesting that a Kingfisher on the pier was in direct line of vision of one of the eagles. At 3:30 N. on the porch was attracted by a strange clucking noise. Turning the 18x towards L.'s cottage, separated from us by a small muddy marsh 50 yards wide, what should be standing on a tall stake but a Bittern (called here Marsh Hen) with its long neck erect. Our first. Ran for the 47x but had left the viewing lens inside. Crabs very scarce and jelly-fish also; only one small one seen. But N. failed to catch a single large Blue which definitely clasped her net. Later in the afternoon, a pair of Bobwhite pecking on the lawn by the Rose of Sharon; then a Turkey Vulture only seen once before this summer, low over the lawn and house; and then N. watched (with the 18x) a male Redwing for the first time also feeding on the lawn. Our friends feeding on the lawn at six PM; Bobwhite, Thrasher, Redwing, Song Sparrow, Cardinal, Robin, Goldfinch (female), Starling, Bluebird (on the drive), Mocking Bird, and others outside the gate. An obvious flycatcher called sharply, "Tweelo, tweelo, tweelo"(Olive-Sided?).

Friday August 12: Hurricane "Connie" with a vengeance. Now 1:30 AM and the high point expected at four. Heard a Crow call once early this AM.

Saturday August 13: Hurricane "Connie" suddenly ceased blowing at 5:35 AM. We came out of the house and within a minute or two heard our Song Sparrow and a cricket singing! A few minutes afterwards, N. spied two Sandpipers on top of the riprap (almost under water), and within a half-hour 7 gulls were on the badly-buckled pier. During the forenoon several Swallowtails appeared. Where do they all find shelter in a 27 hour blast? After lunch N. strolled to the half-destroyed Mulberry and soon shrieked in terror;- She had come across a large brown watersnake close to but out of the water - our first such reptile this year. Has "Connie" brought back what "Hazel" apparently drove out? A little later we spotted the pair of Solitary Sandpipers on the remains of our small end beach. After seeing us they took off over the water. N. was able to walk the damaged pier, disturbing about 20 gulls. Our little tern at 3 PM on its usual stake with 3 others of its ilk on the pier. What pray, is the bird that calls loudly "Teedo, teedo, teedo, t"? Another of my old friends appeared today perched on a mooring stake off the marsh and tearing up some captive - a Marsh Hawk, truly noble bird.

Sunday August 14: Awakened at 5 by a sibilant little fellow calling "Brr, wullova-wullova, wullova, cheek". Again, what is it? We hear unfamiliar calls almost every day. No male Tiger Swallowtails have been seen for three or four days, nor any Fireflies. At 8 another small bird called "Which err, which err, week". Could there not be a manual of bird calls apart from songs? And still another later; "Sweetie, sweetie, sweetie". Our pair of Least Terns fishing acrobatically in a stiff S.E.'ly breeze. The river a golden brown.

Monday August 15: M. at 8 AM reported a large strange insect on his windowsill. N. greatly intrigued. It was a Katydid. Picked him up and let him go. Later N. found a lizard on her bathroom roof. It climbed to our roof slates (about 30 feet up), tried and failed to find an opening and fell into the gutter. From her description, it was a Common Skink.

Tuesday August 15: S.E. showers. Cool. Several terns and a gull on the pier, but our Zeiss 47x alas! has gone for repairs. Another small bird-call: "To wiggie, wiggie, wiggie, we". Towards evening we watched a young great Blue standing watch on the pier. Looked even larger than his parents and is quite differently clothed.

Friday August 19: On return at 11 a.m. after Hurricane "Diane" we were greeted by a loud call from the porch roof "Tu, weest you, weest you". What is it?! And later a small bird in the tanglewood, "Chigga, chigga, chigga, cheek". Another call later "Dick; Weejie, weejie, weejie". Still another small bird; "To-ur, to-ur, to-ur, t". Bobwhite calling at 7:45 P.M., nearly dark. No fireflies since "Connie" struck.

Saturday August 20: At 6:15 AM; a call: "Chillbury, chillbury, chillbury, chill", fairly loud. And from the marsh direction at 7:15 "tu weet, tu weet, tu weet". No Katydid sang last evening; had it been the one we captured on the E side of the house?! Our friend the 3-lined Skink paid a visit to us on the porch at about 6 but soon got lost in the creeper. Yesterday evening we were regaled by quite a sizeable fish breaking right in shore in only 2 feet or so of water. At dusk this evening there were even more leaps some within 20 feet of the bank. Surely Blues. At 9:30 a very pretty white moth settled inside the standing lampshade in our living room. Same identified as a Fall Webworm. How did it get in?!

Monday August 22: L. says our breaking fish are Rock or striped Bass, as we called them on the Vineyard. We heard several splashes close in during the night. Today a posse of gulls on the pier including the Herring Gulls - our first. (Incidentally, we are 12 miles from the mouth in Chesapeake Bay).

Tuesday August 23: Big drop in the glass (73°) after last night's vicious Nor'wester. Another new call at 8:15 AM: "Choo pes-a-choo, pea-a-choo". (by the House Point).

A gull this morning; a Laughing. Our Green Heron on the pier. Bobwhite not heard for three days. At sunset, we rode around House Marsh and saw only a Bittern half-way up a dead tree. The osprey's nest still in position in spite of the hurricane but it looked as though half of it had sagged badly. No birds, no muskrats, watersnakes, or "snappers". The "Hummers" on the petunias when all but dark.

Wednesday August 24: Really cool at last. 65° at 7 AM. We welcomed the gulls for the first time eh masse - about 40 of them. But our 18x not strong enough to identify them all. The hurricanes certainly wiped out the jellyfish. Our young osprey (again we thought we noticed whitish shoulders and not much black on the head) occupied his favorite stake for a long time.

Thursday August 25: Again cool. One of our bronzy-looking Skinks took a long sunbath on the outside sill of a kitchen window. The gulls are vociferous and active today for the first time.

Sunday August 28: The gulls are now in full possession of the pier. An egret also stood on it majestically for a long time.

Tuesday August 30: A fine but dull day. Water 81°. We took the baby for his first trip on the water (6 months and 3 days) and were completely "defeated" by a strange bird. Alas we had no binoculars in the rowing canoe. When first seen it was erect on the large mooring stake - a big black thinnish bird. As we drew closer, it took off and flew with a measured beat low over the water, circled and finally came down in the water near the marsh. It had a very long neck and seemingly small head with a straight bill. N. thought the bill had some yellow in it. She also thought the neck "fawny" in colour. The bird soon rose and flew north! It certainly was no gull, heron, duck, diver or grebe. Could it not have been a double-created cormorant (such as I have often seen in Maine)?! Our egret a lovely sight this evening, standing at the pier and- our young Blue landed on the pier and displaced a Herring Gull. Our Song sparrow failed to sing for the first time; nor did we hear the Cardinal. Cicadas noisy. Our new bird-bath by the Black Walnut not yet a success.- We saw our first Ducks, three of them flying south, of which N. saw the first brace. The third seemed to me (with the 18x) a Black Duck. L. confirmed this.

Wednesday August 31: An oily overcast morning. 73°. The alewives still with us and a very occasional jellyfish. At 7:15 we witnessed a fly-past in perfect V formation of about 30 ducks going south, at about 1000 feet - first real sign of autumn!

Thursday September 1: Cool. Gulls and egrets as usual, quail on the lawn. Many Bluebirds. L. brought us a magnificent bouquet of Black-Eyed Susans, largest I have ever seen. One flower measured 5" across. Another small bird call at 7 PM: "Tw-wiss, tu-wiss, tu-wiss, tooey". N. counted 15 small jellyfish from the pier; so the hurricane did not finish them off! No Cicadas today.

Sunday September 4: Dull and a flat calm. Now for the most incredible of these notes. At about 4 PM with the river almost oily, we went fishing somewhat off the end of our 180 yard pier. Between us and the marsh about 200 yards, from us, was what seemed a large solid-looking gull in the water, though no other gulls were, strangely, in sight. On using the 18x I quickly became puzzled. The bird was a deep brown all over and at least the size of a herring-gull. It possessed a thick strong, black bill with a distinct downward hook. Towards the tail there were a few whitish feathers. The neck was thicker than any herring-gulls. It stayed some 20 minutes before flying off. Unfortunately, I did not see the bird in flight. What indeed could it have been but a Skua! *Megalestris skua!*

The occurrence of this bird in the waters of the Patuxent River seemed so extraordinary, although it exactly fitted the description in Eaton's Birds of New York and Forbush's Birds of Massachusetts, that I decided to examine the skins in the American Museum in New York and the National Museum in Washington. At the former, our bird corresponded exactly to a Skua and at the latter, it became very quickly clear that we had not observed the dark phase of any of the

three Jaegers. To explain the presence of this bird in the Patuxent, it must be borne in mind that hurricane "Connie" hit the neighborhood on August 12th, 23 days before the appearance of the bird. It must also be emphasized that during our stay in our home on the Patuxent, the hurricane blew persistently from the North-East and not from the South-East as might have been expected. In other words, hurricane "Connie" in the Chesapeake Bay area was very largely influenced by a large influx of cold air from the North-East which exercised a dominating factor. It can therefore be reasonably assumed that birds from the far North could have been blown south to our latitude. I feel therefore absolutely confident of the identification and presume that this occurrence of the Skua may be the first for Maryland.*

Monday September 5: At 8 AM. both egrets on the pier railing but only one gull. Cicadas still with us. A flood of hard-shells and we caught about 30.

Tuesday September 6: Dull and flat calm. Alewives still about us. Much twittering at 7:15 AM from invisible flyers passing over us. Nine gulls only on the railing. At 6 PM one of our egrets flew across us towards the marsh at about 200 yards - the first time seen by us on the wing. Superb!

Wednesday September 7: Dull and calm. The alewives are breaking surface which presumably means the Bluefish are after them. Cicadas still at work. We took a 1½ mile row to the head of Point Marsh. Our "bag" only one Terrapin and a brace of Black Duck who have probably spent the summer with us. Not a Redwing nor a Marsh Wren, which is strange.

Thursday September 8: Our first fine autumn day - 63° at 8. 39 gulls on the pier - no herring. Jellyfish apparently finished. A new small bird-call; "Be-choo, be-choo".

Friday September 9: We caught an 8-inch Carp, rather unusual in brackish waters. L. now says that these are the fish which have been rising all along.

Saturday September 10: This evening about 110 gulls on the pier, including a young Herring, brown and much larger than the rest. Oh for our 47x!

Sunday September 11: at 2 PM. N. reported again seeing one of her yesterday's strange birds (in my absence) on the big stake. With the 18x there was no doubt at all that it was a Double-Crested Cormorant (no white-side patches).- the same bird as we saw in flight the other day. Cormorants must be a most rare occurrence in these parts. N. said the other bird yesterday was brownish "with a yellowish bill". Could this not have been a young one? Our lady "Hummer" came to visit a late Hydrangea blossom.

*This is an unusual and interesting record. Sight records of birds are accepted officially only on repeated observation by a number of independent observers. No Skuas have been collected south of Long Island but they have been noted at sea as far south as North Carolina. (Ed.)

Tuesday September 13: Cool, 62° at 8. 156 gulls on the railing of which only 3, Herring. We have not again seen our strange gull-like bird of the 4th. Our "Hummer" came at dusk. They must be nearly ready to leave. The Song Sparrow silent. Cicadas not heard. Bobwhite quiet. Our summer is over and all is well.

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A reader of these fragmentary Nature Notes will have observed that remarkably few of them concern the Passerine birds around and at the back of our lawn (we must have missed about 35 species) and the marsh life enclosing our two creeks. (Our natural point of vantage was our river porch, and our 34x and 47x telescope (except for the last month owing to a defect when it was most needed) greatly assisted our 18x and 10x binoculars. The recognition of largely unfamiliar smaller land birds - of which there were many species - had to be insufficiently pursued. Too few trips were made into the creeks for Rails, etc. But my wife and I hope that any readers of these notes will agree that De le Brooke is, in its own way, an avian paradise.

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